

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Loop, Bridge & Forecastle.

(Type of Superstructures.) See list  
17/12/18

Ship's Name S.S. "Calumet." Nationality and Port of Registry British Liverpool Official Number 147204 Gross Tonnage 7405 Date of Build 1925

Moulded Dimensions: Length 439.6 Breadth 59.0 Depth 33.11"  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 16921 tons  
Coefficient of fineness for use with Tables 792

Port of Survey Montreal  
Date of Survey 25th August 1932  
Name of Surveyor Geo. Allan  
Particulars of Classification +100A.1  
S.S. M.H. No. 2-31

Depth for Freeboard (D) Moulded depth ... 33.92  
Stringer plate ... .04  
Sheathing on exposed deck None  
 $T \left( \frac{L-S}{L} \right) =$   
Depth for Freeboard (D) = 33.96

Depth correction  
(a) Where D is greater than Table depth  
(D - Table depth) R = (33.96 - 29.31) 3.00 = +13.95  
(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =  
If restricted by superstructures ☒

Round of Beam correction  
Moulded Breadth (B) 59.0"  
Standard Round of Beam =  $\frac{B \times 12}{50} = \frac{59 \times 12}{50} = 14.16$   
Ship's Round of Beam 12" = 12  
Difference 2.16  
Restricted to  
Correction =  $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{2.16}{4} \times 3769 = + 20.97$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>37.1 1/2"</u>	<u>37.13</u>	<u>8'0"</u>	-	<u>37.13</u>
overhang ...	<u>None</u>				
R.Q.D. enclosed ...	<u>✓</u>				
overhang ...	<u>✓</u>				
Bridge enclosed...	<u>187.11"</u>	<u>187.92</u>	<u>8'9"</u>	-	<u>187.92</u>
overhang aft ...	<u>None</u>				
overhang forward	<u>✓</u>				
Fore enclosed ...	<u>48.10 1/2"</u>	<u>48.87</u>	<u>8'0"</u>	-	<u>48.87</u>
overhang ...	<u>None</u>				
forward ...	<u>✓</u>				
Tonnage opening aft ...	<u>✓</u>				
forward	<u>✓</u>				
Total ...	<u>273.92</u>	<u>273.92</u>			<u>273.92</u>

Standard Height of Superstructure 7.50  
" " R.Q.D. 42.00  
Deduction for complete superstructure 42.00  
Percentage covered  $\frac{S}{L} = \frac{273.92}{62.31} = 4.40$   
 $\frac{S_1}{L} = \frac{273.92}{62.31} = 4.40$   
 $\frac{E}{L} = \frac{273.92}{62.31} = 4.40$   
Percentage from Table, Line A.  
(corrected for absence of forecastle (if required)) 49.93  
Percentage from Table, Line B.  
Interpolation for bridge less than .2L (if required)  
Deduction =  $42 \times .4993 = - 20.97$

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>53.96</u>	1		<u>53.96</u>	<u>31.0</u>	<u>31.00</u>	1		<u>31.00</u>
1/4 L from A.P. ...	<u>24.01</u>	4		<u>96.04</u>	<u>10.5</u>	<u>9.10</u>	4		<u>36.40</u>
1/2 L " ...	<u>5.94</u>	2		<u>11.88</u>	<u>2.6</u>	<u>-1.00</u>	2		<u>-2.00</u>
Amidships ...		4					4		
3/4 L from F.P. ...	<u>11.87</u>	2		<u>23.74</u>	<u>10.2</u>	<u>13.25</u>	2		<u>26.50</u>
3/4 L " ...	<u>48.03</u>	4		<u>192.12</u>	<u>40.9</u>	<u>41.50</u>	4		<u>166.00</u>
F.P. ...	<u>107.92</u>	1		<u>107.92</u>	<u>91.0</u>	<u>91.00</u>	1		<u>91.00</u>
Total ...				<u>485.66</u>					<u>348.90</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{136.76}{18} \left( .75 - \frac{311.5}{62.31} \right) = + 3.33$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck =	<u>33.96</u>
Summer freeboard =	<u>7.27</u>
Moulded draught (d) =	<u>26.69</u>

## Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches =  $6.67 = 6 \frac{3}{4}$ "

## Addition for Winter North Atlantic Freeboard (if required =

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 15659$

Tons per inch immersion at summer load water line

$T = 52.2$

Deduction =  $\frac{\Delta}{40T}$  inches

$= \frac{15659}{40 \times 52.2} = 7.50 = 7 \frac{1}{2}"$

## TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

$\frac{.68 \times 792}{1.36} = \frac{1.472}{1.36}$

	+	-
Depth Correction ...	<u>13.95</u>	
Deduction for superstructures ...		<u>20.97</u>
Sheer correction ...	<u>3.33</u>	
Round of Beam correction ...	<u>2.0</u>	
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
	<u>17.48</u>	<u>20.97</u>

Summer Freeboard =

## SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	<u>14 1/4"</u>	Tropical Fresh Water Freeboard ...	<u>6'</u>
Fresh Water Line " " ...	<u>7 1/2"</u>	Fresh Water " " ...	<u>6'</u>
Tropical Line " " ...	<u>6 3/4"</u>	Tropical " " ...	<u>6'</u>
Winter Line below " " ...	<u>6 3/4"</u>	Winter " " ...	<u>6'</u>
Winter North Atlantic Line " " ...	<u>6 3/4"</u>	Winter North Atlantic " " ...	<u>6'</u>

27 SEP 1932

20 APR 1938



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

## HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECK

Description of Hatchway	N <sup>o</sup> . 1.	N <sup>o</sup> . 2.	N <sup>o</sup> . 3.	N <sup>o</sup> . 4.	N <sup>o</sup> . 5+6.
Dimensions of Hatchway	24'9" x 16'0"	27'6" x 16'0"	15'9" x 16'0"	20'7" x 16'0"	22'10" x 16'0"
COAMINGS					
Height above Deck	30"	30"	30"	30"	30"
Thickness	44"	50"	44"	44"	44"
Sides	44"	44"	44"	44"	44"
Stiffeners	24'9"	27'6"	none	36'8"	22'11"
Brackets, Stays	none	none	3	5	5
HATCH BEAMS					
Number	5	5	4	4	4
Spacing	49 1/2"	54 1/2"	41"	41"	45"
Scantling and Sketch	12" x 6" x 6" x 44 lbs.	14" x 6" x 6" x 44 lbs.	12" x 6" x 6" x 44 lbs.	12" x 6" x 6" x 44 lbs.	12" x 6" x 6" x 44 lbs.
Bearing Surface	3"	3"	3"	3"	3"
FORE AND AFTERS					
Number	no fore and afters	no fore and afters	no fore and afters	no fore and afters	no fore and afters
Unsupported Lengths	no fore and afters	no fore and afters	no fore and afters	no fore and afters	no fore and afters
Scantling and Sketch	no fore and afters	no fore and afters	no fore and afters	no fore and afters	no fore and afters
Bearing Surface	no fore and afters	no fore and afters	no fore and afters	no fore and afters	no fore and afters
HATCH COVERS					
Material	Wood	Wood	Wood	Wood	Wood
Thickness	3"	3"	3"	3"	3"
How fitted	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Bearing Surface	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
Spacing of Cleats	22"	22"	22"	22"	22"
Number of Tarpaulins	3	3	3	3	3
*Are wood fore and afters steel shod at all bearing surfaces?	Yes	Yes	Yes	Yes	Yes
Are battens and wedges efficient and in good condition?	Yes	Yes	Yes	Yes	Yes
Are tarpaulins in good condition and in accordance with rule requirements?	Yes	Yes	Yes	Yes	Yes
Are lashings provided in accordance with rule requirements?	Yes	Yes	Yes	Yes	Yes

Particulars of fiddle, funnel and ventilator coamings:—  
 Fiddle, coaming above boat deck, 6" high.  
 No coaming to funnel, Vent coaming 6" high.  
 All vents have permanent hinged steel covers.  
 Skylights to engine room etc. Steel coamings with wood  
 and glass covers attached.

### Particulars of Flush Bunker Scuttles:—

None

### Particulars of Companionways:—

None

### Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

6 Vents in Fore well deck, 2 Vents in Forecastle, 6 Vents on aft. Well deck, 2 Vents  
 4 Vents in Bridge deck. All steel coamings rivetted to deck, 16" high coaming  
 20" diam and 7/16" thick. Efficient closing appliances are provided

### Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Air pipes are 27" high on Bridge deck and 27" high on Well deck.  
 All of substantial construction and well protected.  
 Efficient closing appliance are provided

### Particulars of Gangway Cargo and Coaling Ports:—

Two Cattle doors in Bridge space aft end.  
 5' 10 1/2" x 3' 11 1/2" Water tight doors of substantial construction

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 Foundation



Particulars of Scuppers and Sanitary Discharge Pipes: 16 Sanitary Discharges 12 Scuppers in Hull Deck  
10 Scuppers in Bridge deck. All discharges flush or above main deck with Clapper valves fitted at ship side.

Particulars of Side Scuttles:

None

Particulars of Guard Rails:—

Bulwarks fitted full length.

Particulars of Gangway, Lifelines, etc.:

None

Provision is made for rigging lifelines for use in any part of the ship which might have to be used by the crew in the regular working of the ship

Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ... ..	80' 2"	4' 2 1/2"	2' 11" x 18"	4	18 sq ft.	16 1/2
Forward Well ... ..	80' 5 1/2"	4' 2 1/2"	2' 11" x 18"	4	18 sq ft.	17 1/2

State position of each freeing port ... .. After Well:— 13" abreast Nos 5-4-6 Hatches  
and A. position and height above deck edge) Forward Well:— 13" Two abreast No. 1. and Two abreast No. 2.  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 3 Vertical bars  
Additional area where sheer is less than standard. ✓

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Top Bulkhead ... ..	42"	7/16"	7" x 3 1/2" L	29"	None	3' 6" x 5' 0"	18"	8' 0"
Raised Quarter Deck Bulkhead ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Bulkhead, After Bulkhead ... ..	None	5/16"	4" x 4"	2' 8"	None	11 1/2"	8' 9"	8' 9"
Bulkhead, Forward Bulkhead ... ..	48 1/2"	1/2"	8 1/2" x 3 1/2" B L	27 1/2"	18 1/2" x 19 1/2"	5' 0" x 3' 0"	19	8' 9"
Castle Bulkhead ... ..	None	1/4"	3 1/2" x 2 1/2"	31"	None	2' 0" x 5' 5"	13"	8' 0"
Bulkhead, Aft ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Bulkhead, Forward ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Raised Machinery Casings on Freeboard or Raised Quarter Decks ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Raised Machinery Casings on Superstructure Decks ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	✓	✓	✓	✓	✓	✓	✓	✓
Deckhouses on Flush Deck Ships ... ..	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Bulkhead ... ..	2 Hinged steel doors 3' 0" x 5' 0" can be opened from both sides
Quarter Deck Bulkhead ... ..	✓
Bulkhead, After Bulkhead ... ..	2. Cargo doors 3' 5" x 3' 6". 3" Wood boards fitted full length in channels
Bulkhead, Forward Bulkhead ... ..	2. Steel watertight doors 5' 0" x 3' 0" can be opened from both sides
Castle Bulkhead ... ..	1. Opening door 3' 0" x 5' 5" of wood. Can be opened from both sides
Raised Machinery Casings on Freeboard or Raised Quarter Decks ... ..	Protected by deck houses
Raised Machinery Casings on Superstructure Decks ... ..	None
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	None
Flush Deck Ships ... ..	None



any special features in the construction of the ship:— *Total displacement at load line 26' 8"*  
*is 10,708 tons Average 52 tons per inch.*

This vessel was examined afloat at Shed #28 Montreal

Particulars of Closing Appliances (state if capable of being maintained from both sides)										
Names of sister ships	Owners	Received by me	Height of Casings	Height of Sills	Size of Openings	End Attachments of Sill-frames	Spacing	Sill-frames	Plating	Casings
John Brown & Co. Ltd. Glasgow	Elder Dempster & Co. Liverpool									
"Galgary"										

£ 100.00  
Paid to  
Lloyd's Bank

Received by me

Lloyd's Bank